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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,683

04/11/2006

Borje Maleus

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9217

23117

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01/05/2009

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EXAMINER

MURALIDAR, RICHARD V

ART UNIT

PAPER NUMBER

2838

MAIL DATE

DELIVERY MODE

01/05/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,683	<b>Applicant(s)</b> MALEUS, BORJE	
	<b>Examiner</b> RICHARD V. MURALIDAR	<b>Art Unit</b> 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

DETAILED ACTION

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-6, 8-9, 12-16, and 18-19 are rejected under 35 U.S.C. 102(b) as being anticipated by McDermott et al. [U.S. 6,545,445].**

With respect to claims 1 and 8, McDermott discloses a device for managing a battery system including a number of serially coupled batteries comprising: voltage detecting means [Fig. 2; 208 with 218, 236] connected to said battery system [Fig. 2; col.1 lines 5-10]] and arranged to detect the battery voltage over the batteries of the battery system; DC-to-DC-converting means [col. 5 lines 55-64] connected to said battery system; and a controller [Fig. 2, 208] connected to said voltage sensing means and to said DC-to-DC-converting means and being arranged to control the voltage distribution over the batteries of the battery system [col. 5 lines 1-20] via said DC-to-DC-converting means to purposefully create an applied voltage imbalance between different batteries of the battery system [col. 2 lines 47-53; col. 3 lines 36-43; lines 54-56; col. 5 lines 7-15].

With respect to claim 14, McDermott discloses a device for managing a battery system including multiple serially-coupled batteries, comprising: a voltage detector [Fig. 2; 208 with 218, 236] arranged to detect the battery voltage [col. 5 line 30] of a first

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battery [Fig. 2, 202] and a second battery [Fig. 2, 204] in the battery system [col. 1 lines 5-10]; a battery charger [col. 5 lines 18-21]; and a controller [Fig. 2, 208] connected to the voltage detector and to the battery charger and being arranged to receive from the voltage detector a first detected voltage for the first battery and a second detected voltage for the second battery that is different than the first detected voltage, the controller being further arranged to control the battery charger [col. 2 lines 33-37; lines 47-53; col. 3 lines 43] to charge the first battery at a first charging voltage based on the first detected battery voltage and to charge the second battery at a second different charging voltage [Fig. 2; col. 5 lines 13-15; col. 5 lines 64-67] based on the detected on the detected second battery voltage [col. 5 lines 55-61; col. 6 lines 2-5].

With respect to claim 3, charging one battery at a higher voltage than another as disclosed by McDermott will result in an enhanced detection of the voltage imbalance/difference, since a higher voltage is easier to be/(more accurately) detected.

McDermott discloses all the remaining limitations of dependent claims 2-6, 9, 12-13, 15-16, 18-19 [see above and entire disclose. Note the examiner's interpretation of "imbalanced voltage"].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 7, 10-11, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over McDermott et al. [U.S. 6,545,445] in view of Tamai et al. [U.S. 6,275,004].**

With respect to the remaining dependent claims 7, 10-11, and 17, McDermott discloses all that is recited except for sensing a temperature parameter, utilizing a timer, and utilizing a [discrete component] type DC/DC converter (Note: McDermott does disclose a DC/DC converter of sorts, as shown in the main claims).

Tamai discloses a vehicle electrical system which senses a temperature parameter [col. 4 lines 27-35], utilizing a timer [col. 5 lines 37-43], and utilizing a [discrete component] type DC/DC converter [Fig. 1, 24].

McDermott and Tamai are analogous vehicle battery systems for controlling charging of multiple batteries. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of McDermott and Tamai in order to optimize battery cycle life, maximize SOC, and reduce lead acid sulfation [Tamai- col. 2 lines 1-59].

***Response to Arguments***

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD V. MURALIDAR whose telephone number is (571)272-8933. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Akm E. Ullah can be reached on 571-272-2361. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Akm Enayet Ullah/  
Supervisory Patent Examiner, Art  
Unit 2838

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Examiner, GAU 2838